Two specimens of M. o. oregoni from the north base of Three Sisters, 5,000 feet, in the Cascade Mountains of Oregon (nos. 204,722, 3, and 204,718, 3, U. S. Nat. Mus., Biological Survey collection) are larger than the typical form, and may be referable to cantwelli.

I am indebted to Prof. W. T. Shaw, in charge of the museum, State College of Washington, Pullman, Washington, for the loan of material.

GENERAL NOTES

SOME NOTES CONCERNING THE MASTIFF BAT

In Mr. A. B. Howell's recent paper on bats, the remark is made that, after trying various methods, he did not succeed in making the mastiff bat (*Eumops californicus*) fly (Journ. Mamm., vol. 1, no. 3, p. 112, 1920). I had the opportunity to study several of these bats taken with Mr. Howell at Colton, Riverside County, California. The bats were placed in a large screen porch where there was ample room for them to fly. One afternoon while trying various experiments with the animals, I succeeded in making one bat take wing from the floor. It flew up about two feet and made a semicircular flight of about ten feet and then lunged to the floor again. This attempt looked rather encouraging, but as hard as I tried, I could not make the bat fly again. On warm days the bats were very active, and when disturbed they scampered about seeking a dark corner, or something to crawl under. When they bumped into the wall, or any perpendicular object, they began to climb head forward until off of the floor, and then turned and climbed backwards, pulling with each foot alternately.

-Luther Little.

South Pasadena, Calif.

AS TO THE WOLVERINE

The story which tells that the "glutton" or wolverine secures its prey by lying in wait on the branches of a tree for a deer to pass under it and dropping on the deer's back and killing it has been the text for not a little jocular writing. Coues laughed at it and says of the wolverine, "It is imperfectly plantigrade and does not climb trees like most of its allies." Most people regard the tale as fable. Is it so, or has it—like many other traditions—a basis of fact?

Little seems to be known of the wolverine's habits. A few trappers have told of the mischief it does along the trap line, but except for that, not much has been written of its ways of life; and of what has been told, almost none is at first hand. The animal seems hardly to have been observed by naturalists.

It is generally stated that the wolverine does not attack large animals, but lives on grouse and rabbits and other small creatures. This means only that because—in the opinion of the writers—it is not sufficiently active to catch them, therefore it does not attack large animals. It will subsist on whatever food is most easily accessible and this may cover a wide range of species, from

mice to moose. Mr. Charles Sheldon has seen the tracks of wolverines in winter on the crests of the mountains in Alaska, apparently following sheep tracks and sheep trails, and this suggests that they may kill sheep. But we know nothing about the matter.

We have some evidence that the wolverine has plenty of courage and that it does attack the largest animals. A dozen years ago there was printed an account, by Mr. J. Keele, of a case where a wolverine had attacked a moose. Mr. Keele and his companion came upon a moose in a hole in the deep snow, killed it, and found that the animal had been injured by a wolverine which appeared to have climbed trees and to have dropped on the animal's back. Hair had been torn from the moose in many places and on its back there was "a large hole apparently freshly gnawed into the animal's backbone, the spinal cord being almost laid bare." Mr. Keele gave many details of the evidence that he saw of the actions of the moose and of the wolverine during this contest, which may have lasted for two or three days.

Martin Hunter, an old Hudson's Bay man who was in the service of that company from 1863 to 1903, during which years he traveled over much of the eastern half of North America, contributed during a number of years to certain outdoor periodicals many brief sketches of life in the open, and in one of them gives an account which closely matches the old story derided as fable, for he tells of seeing a wolverine kill a caribou to the back of which it was clinging. This is the account:

"A few moments after, we saw a large caribou break cover about one hundred yards to the right and spring into the lake; but what was that black object clinging to his neck? Surely some animal!

"The caribou struck out as fast as it could swim, heading for the further shore, and we jumped into our canoe and gave pursuit. The keen eyes of the animal on the caribou's neck having detected us, it relinquished its hold, dropped off into the water, and turned for the shore the caribou had left.

"The canoe was immediately headed to cut off his retreat and when within proper distance, I shot it with one barrel, and left it there dead on the surface of the lake, while we continued on our chase.

"This diversion had taken our attention from the caribou, but now, when we had resumed the chase, we found the animal was getting through the water very slowly, and as we were paddling in its wake, we perceived the water at each side of the caribou was bloody. By the time we reached the caribou it was dead.

"On examination, we found the jugular vein had been cut by the fierce animal on its back and it had bled to death, fleeing with what strength it had, to the last drop of the poor thing's blood.

"We threw a string over its horns and towed it back to the portage, picking up in passing our floating black animal, which proved to be a very large wolverine, carcajo, or Indian devil, the beast going under all of these names with hunters and traders."—Canadian Indian Wilds, p. 150, Columbus, 1907.

I have seen the wolverine alive in the wilds on but few occasions and know nothing as to its tree-climbing powers. Mr. Keele distinctly says he saw marks where it had climbed a tree. Mr. Sheldon has seen it run up a tree, when

¹ Forest and Stream, Vol. LXXI, p. 971.

chased by dogs, as easily as would a coon. This seems conclusive, for if a wolverine chased by a dog runs up a tree, that implies knowledge that a dog—i.e., a wolf—cannot climb, and that a tree is a refuge; hence tree-climbing ability—and some tree-climbing practice.

I have read somewhere of a wolverine climbing one of the vertical poles to reach a platform above the ground in order to get at packages that were stored on the platform. At all events positive testimony that a wolverine has been seen to run up a tree disposes of the opinion expressed by Doctor Coues that the wolverine does not climb trees.

The accounts given by Messrs. Hunter and Keele and the evidence from Mr. Sheldon suggest that some of those who have written about the wolverine were no better informed about it than ourselves.

Mr. Hunter, as already said, was for forty years in the service of the Hudson's Bay Company, and for the last twenty years was a commissioned officer in that service. I have no personal knowledge of him, but am disposed to credit his statement.

Wild animals often perform unexpected acts which are wholly at variance with our preconceived ideas of them, and because these actions are new, and perhaps contradict our old ideas, we are likely to doubt the accuracy of the observation, and find it hard to believe what is told us. A few years ago when Mr. Sheldon reported the killing of a mountain sheep by a lynx some of us were much astonished, yet the same thing had been reported one hundred years before—but we did not know it. Mr. Sheldon's extraordinary experience, on Montague Island, Alaska, with the bear which unwittingly ran against him and knocked him down but did not attack him, is another incredible happening. So also is the act by a black bear in the Northwest Territories which crossed a river, came out on the bank, and there killed and began to eat a man.² This happening was related by Mr. J. H. McIlree who was long an officer of the Northwest Mounted Police, well known to me, and absolutely trustworthy. It was supported by affidavits of two men who were present.

-George Bird Grinnell.

A CALIFORNIA RECORD OF MICROTUS OREGONI BAIRDI

At the time of its description (C. H. Merriam, Proc. Biol. Soc. Washington, vol. 11, p. 74, 1897), the Baird meadow mouse (*Microtus bairdi* as then known) was represented by only two specimens, both collected at the type locality (Glacier Peak, 7800 feet, Crater Lake, Oregon). Three additional examples were collected in September, 1905, by J. F. Ferry at Beswick, California (Nos. 139,195 to 139 197, U. S. Nat. Mus., Biological Survey Collection). This record is of special interest because it adds one more species to the list of California mammals.

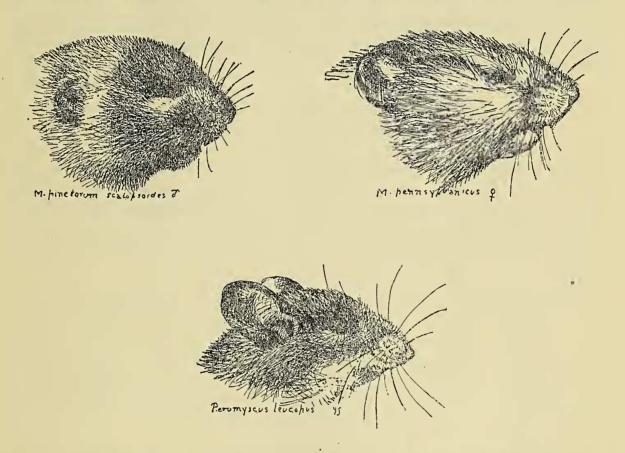
Comparison of specimens of bairdi with specimens of Microtus oregoni oregoni, from the vicinity of Astoria, Yaquina Bay, Wells, and Oregon City, Oregon, shows the differences between them to be subspecific rather than specific.

-Walter P. Taylor.

² Forest and Stream, Vol. LXVIII, p. 974, June 22, 1907; Vol. LXX, p. 214, February 8, 1908.

THE MOLE-MOUSE, POTATO-MOUSE OR PINE-MOUSE

In 1908 I built a hollow tree 7 feet through and 35 feet high, on an island of my lake at Cos Cob, Connecticut. It was intended to be a sort of observatory of the birds and beasts that commonly harbor in such places. I made a great variety of nesting boxes, and arranged all so that, while hidden inside, I could observe them. On November 12, a screech owl established himself in one of the hollow limbs and in the dark corner of the place soon had a regular storehouse of surplus provisions. On December 17, I found in this owl's larder a specimen of *Microtus pinetorum scalopsoides*, sometimes called pine-mouse, the first record for Connecticut. This led to a renewal of trapping activities with the



result that I got as many of these mice as I wished; but not at all in the places, or under the circumstances, that are commonly mentioned as congenial. All of them were taken in the potato field, where they lead a life much more subterranean than that of meadownice, but less so than that of moles. The name scalopsoides then is very suitable.

Quite commonly field naturalists, when they find a new animal in their traps, are struck by its great unlikeness to others of its group. The facial lines and expressions as well as the body contour, are very different. Unfortunately these important matters are destined wholly to disappear in the museum skin. With this thought in mind I have drawn from fresh specimens of mice as they came to hand. I hope they illustrate my point.

-Ernest Thompson Seton.

THE WHITE-TAILED JACK RABBIT, LEPUS TOWNSENDII CAMPANIUS, INTRODUCED INTO WISCONSIN

The occurrence of Lepus townsendii campanius Hollister as a native mammal in Wisconsin has always seemed to me more or less of a possibility. It was, therefore, not entirely a surprise when on August 13, 1918, I saw numerous tracks, which appeared to belong to this species, on the sand barrens north of the Chippewa River at Meridean, Dunn County, Wisconsin. Although careful search was made for the animals in the limited time at my disposal, none was seen. Returning to the village I made inquiry of several residents and learned that these jack rabbits were not native, but had been introduced from Minnesota about the year 1908 and that they had thrived very well. The next day, August 14, a mounted specimen in winter pelage, which had been collected on these sand barrens about 1912, was examined in the collection of Mr. John N. Clark, of Meridean, Wisconsin.

-Hartley H. T. Jackson.

MEASUREMENTS OF AN UNUSUAL ELK HEAD

The following measurements of the head of a fine old male elk (*Cervus canadensis*) which was found dead near the northern boundary of the park, February 25, 1920, were made by me in the course of work at the museum, National Park Service, Yellowstone Park, Wyoming. While the lengths of horn and tines are not extraordinary, I can find no record of larger measurements of circumference of beam.

Right hand horn		Left hand horn
45	Length of beam	48
$17\frac{1}{2}$	1st tine	$17\frac{1}{2}$
$14\frac{1}{2}$	$2 { m d} \ \ { m tine}$	$12\frac{1}{4}$
$15\frac{1}{2}$	3rd tine	$13\frac{1}{2}$
17	4th tine	7
13	5th tine	$17\frac{1}{2}$
4	6th tine	6
none	7th tine	9
	Total length beams and times 21 ft. $6\frac{1}{4}$ in	•
12	Circumference at burr	12
	Circumference between	
$8\frac{3}{4}$	1st and 2d tines	$8\frac{1}{2}$
$8\frac{5}{8}$ $9\frac{5}{8}$	2d and 3rd tines	81/4
$9\frac{5}{8}$	3rd and 4th tines	$9\frac{1}{2}$
	Widest spread 50 inches	
	Widest spread inside of beams 38 inches	

-M. P. Skinner.

Yellowstone Park, Wyoming.

DEATH OF JAMES M. MACOUN

On January 8, 1920, James M. Macoun, chief of the Biological Division of the Geological Survey of Canada, died at his home in Ottawa. He was born at Bellville, Ontario, in 1862, and was the son of the venerable botanist of the Dominion, Prof. John Macoun, who, it is a pleasure to state, is still living.

James Macoun, though primarily a botanist, inherited also his father's interest in birds and mammals. During the thirty-six years of his service with the Geological Survey of Canada, of which he was appointed assistant naturalist in 1898, botanist in 1917, and chief of the Biological Division in 1918, he traversed many remote and little known parts of the Dominion, from Lake Mistassini, Hudson Bay, and Churchill River westerly to Lesser Slave Lake and Peace River and various parts of British Columbia, collecting specimens and field notes that form an important part of the Victoria Museum at Ottawa; and for a number of years largely directed the field work of William Spreadborough when making his well-known collections of mammals and birds for the Canadian Government.

In 1910, while studying the flora and fauna of the west coast of Hudson Bay, the vessel was wrecked and the party obliged to escape in a small boat. Fortunately, they were rescued and taken to Fort Churchill, from which remote outpost they made the overland journey to Lake Winnepeg on foot in the depth of winter.

James Macoun assisted his father in the preparation and editing of the two editions of the extensive and exceedingly useful work entitled "Catalogue of the Birds of Canada."

In 1901 he visited the Pribilof Islands in Bering Sea as Canadian secretary to the British Fur-Seal Commission and in subsequent years (1906 and 1914) returned to the Islands in connection with the fur-seal controversy.

I first met James Macoun at his father's home in Ottawa in the early 80's and was with him at the Pribilof Islands in 1891, since which I have seen him from time to time during his occasional visits to Washington. As a naturalist, he inherited much of his father's enthusiasm and kindly helpful disposition, so that in both field and office he was an agreeable companion. His sympathies were with those in the humbler walks of life; his motto was "Equal opportunity for all."

He is survived by a wife and daughter, and, as a recent writer adds, "by a host of friends and sorrowing colleagues."

-C. Hart Merriam.

DEATH OF THOMAS M. OWEN

Dr. Thomas M. Owen, of Montgomery, Alabama, a member of the Society, died March 25, 1920, in the fifty-fourth year of his age. He was a prominent historian, author of several important historical works, and director of the Department of Archives and History, State of Alabama. He took a deep interest in the advancement of natural history and was engaged in building up under his department in the State Capitol an exhibition collection of local birds and mammals.

-Arthur H. Howell.